

#### 4.3.5.1.7 Cultural and Paleontological Resources

This section discusses impacts to cultural and paleontological resources that may result from construction and operation of the MOX fuel fabrication facility at each of the representative sites analyzed, and a generic site. The land to be disturbed during construction would be 121 ha (300 acres) of which 81 ha (200 acres) would be used during operations. A 1.6-km (1-mi) reduced-access buffer zone would be created around the facility at all sites except ORR, where the buffer zone would be smaller. For the discussion of impacts, the term cultural resources includes prehistoric, historic, and Native American resources. Cultural and paleontological resources at the representative sites may be affected directly through ground disturbance during construction, building modification, visual intrusion of the project to the historic setting or environmental context of historic sites, visual and audio intrusions to Native American resources, reduced access to traditional use areas, and unauthorized artifact collecting and vandalism.

##### *Hanford Site*

The facility would be constructed west of the 200 East Area. Although no archaeological resources were identified during surveys conducted in the adjacent 200 Areas, some may exist in the project area. If sites were identified, efforts would be made to avoid them. Operations would not result in additional impact.

Although all of Hanford is considered sacred land by some Native American groups, no areas of great cultural significance have been identified in close proximity to the 200 Areas. Resources may be identified through project-specific consultation. Impacts from construction and operation may include reduced access to traditional use areas or visual or auditory intrusion into sacred or ceremonial space.

Pliocene and Pleistocene fossil remains have been discovered at Hanford. Although none have been recorded in the project area, they may exist. These resources may be affected by ground disturbing construction. Operation would not have an additional impact on paleontological resources.

##### *Nevada Test Site*

The MOX fuel fabrication facility would be constructed in Area 6, near the DAF on Frenchman Flat. In 1984, a Class III cultural resources survey was conducted across the 660-ha (1,610-acre) DAF site and no NRHP-eligible sites were identified. Although no resources were identified within the DAF project area, Frenchman Flat contains 49 sites which have been determined eligible for inclusion on the NRHP. Recorded prehistoric sites within Frenchman Flat include base and temporary camps, quarries, and lithic reduction areas. Identified historic resources include sites associated with nuclear testing and research. Additional unsurveyed lands necessary for the proposed facility may contain similar prehistoric or historic resources. Impacts to resources would occur during construction of the proposed facility. Operation would not result in additional impact as it does not involve ground disturbance or increased activity.

The CGTO has conducted surveys over portions of Frenchman Flat and identified at least 20 plant species of importance to Native Americans. Additional project-specific consultations would be necessary to identify impacts to Native American resources resulting from facility construction and operation. Potential impacts include reduced access to traditional use areas and visual or auditory intrusions to sacred space.

Although none have been identified to date, Quaternary deposits containing scientifically valuable paleontological remains may occur in the area to be disturbed during construction. Such remains have been found near NTS. Paleontological remains may be affected by construction, but not operation, of the facility.

### ***Idaho National Engineering Laboratory***

The facility would be constructed adjacent to the existing ICPP security area. A surface survey of the area identified no sites within the proposed project area. Although it is possible, the ICPP is unlikely to contain intact subsurface cultural deposits due to prior ground disturbance and environmental setting. INEL has a contingency plan in place should any archaeological remains be discovered during construction. Two historic sites are located adjacent to the ICPP—one historic can scatter across the Big Lost River, to the northeast, and one abandoned homestead to the east. The can scatter is not considered eligible for NRHP listing and the homestead has been fenced off for protection. Construction and operation are not expected to affect either site.

Native American resources may be affected by the proposed action. Facility construction and operation may have a visual or auditory impact on traditional use areas or sacred sites. Such resources can be identified through consultation with the interested tribes.

Some paleontological remains may be encountered during construction. The ICPP lies on alluvial gravels associated with the Big Lost River floodplain which have produced fossilized remains.

### ***Pantex Plant***

The MOX fuel fabrication facility would be constructed in Zone 11 of Pantex. Areas to be disturbed by development have not been systematically surveyed for archaeological or paleontological resources. Prior to construction, additional survey work may be necessary. Because Zone 11 is disturbed, it is unlikely to contain intact subsurface prehistoric or historic remains. Should any subsurface remains be discovered during construction, appropriate mitigation, documentation, and/or preservation measures would be conducted as necessary. Operation would not have additional impact to archaeological resources as it does not result in additional ground disturbance.

Facility construction may have an impact on historic structures at Pantex. The original buildings at Pantex were constructed between 1942 and 1945 to produce general purpose bombs. Zone 11 contains buildings, ramps, and landscape features which clearly illustrate the historic layout of a World War II bomb manufacturing line. Only two buildings within Zone 11 have been determined ineligible for listing on the NRHP. Construction may obscure the spatial relationship between these buildings, thereby compromising their historic significance. Operation of the facility is not expected to affect historic structures.

DOE has recently initiated consultation with Native American groups that have expressed interest in Pantex lands. To date, no Native American resources have been identified within Zone 11. Some resources may be identified through additional consultation. Although no mortuary remains have been discovered at Pantex to date, it is possible that some exist within the land to be disturbed by development. Burials are considered important Native American resources. Also, construction and operation may have an impact on traditionally used plant and animal species.

Important paleontological remains, such as bison and camel bones, have been found in other areas of the High Plains. The land to be disturbed during construction may contain some paleontological remains. Operation would not have an additional effect on paleontological remains.

### ***Oak Ridge Reservation***

The MOX fuel fabrication facility would be constructed adjacent to Y-12. This area has not been systematically surveyed. Although some of the land is disturbed, it may contain prehistoric or historic resources. Recorded prehistoric sites at ORR include villages, burial mounds, lithic workshops, and quarries. Historic sites recorded at ORR include both archaeological remains and standing structures. One prehistoric site, (40AN6), a lithic scatter, has been identified to the east of the Y-12 fences, near Scarboro Road. Additional prehistoric or historic

resources may occur in the project area, and these could be affected by construction. Operation, because it does not involve additional ground disturbance, is not expected to affect any prehistoric or historic resources.

Although none have been identified near Y-12 to date, facility construction and operation could have an impact on some Native American resources. For example, archaeological sites, which can be affected by construction, are sometimes considered Native American resources. In addition, the presence of a facility may create a visual intrusion into sacred or ceremonial space.

Fossilized remains occurring at ORR have little research value, so impacts to paleontological remains would be considered negligible.

#### ***Savannah River Site***

The MOX fuel fabrication facility would be located approximately 1.6 km (1 mi) north of the P-Reactor Area on the east side of SRS Route F. To date, seven prehistoric sites have been located within 0.5 km (0.3 mi) of this area, so the potential for archaeological sites is moderate to high, and some NRHP-eligible resources may occur within the acreages that would be disturbed by construction. Prehistoric site types that may occur at SRS include villages, base camps, limited activity sites, quarries, and workshops. Historic site types that may occur at SRS include farmsteads, tenant dwellings, mills, plantations and slave quarters, rice farming dikes, cattle pens, dams, towns, churches, cemeteries, trash scatters, and roads.

Some Native American resources such as remains of villages, traditional plant gathering areas, cemeteries, and isolated burials may be affected by construction and operation of the facility.

No scientifically valuable fossil remains have been recorded at SRS to date. Facility construction and operation are not expected to affect paleontological resources.

#### ***Generic Site***

This facility involves the use of an area adjacent to an existing fuel fabrication facility. No impacts to prehistoric, historic, or paleontological resources are anticipated because construction would occur on previously disturbed ground. Operation could affect some Native American resources. For example, the facility could create auditory intrusion into important Native American ceremonial or sacred sites. Increased security may result in reduced access to traditional use areas. Native American resources can be identified through project-specific consultation with potentially affected tribes.

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